

JP 10-073959 discloses an electrostatic image developing toner containing at least a binder resin, a coloring agent, and a thermoplastic elastomer. It also contains 25% or more of a component having a molecular weight of 10,000 or less in the molecular weight distribution measured by JPC of THF soluble content. The content of the thermoplastic elastomer is preferably 0.1-30 parts by mass to 100 parts by mass of the binder resin, more preferably 1.0-10 parts by mass. The computer generated English translation provided by the Examiner appears to indicate that the toner can include various waxes. While it does not appear from the computer generated English translation or abstract that the amount of wax is defined, the office action alleges the polypropylene of Example 1 to be a wax present in an amount of 1 wt. %.

As noted above, the binder resin in the present invention contains alicyclic olefinic resin (A), the alicyclic olefinic resin (A) being made by copolymerizing cyclic olefin (A1) and acyclic unsaturated olefinic monomer (A2).

The cyclic olefin (A1) in the present invention is alkene: aliphatic unsaturated hydrocarbon having at least one double bond in the molecular, in which the double bond is transformed to a single bond by vinyl polymerization with the acyclic unsaturated olefinic monomer (A2) during formation of the alicyclic olefinic resin (A). For example, cyclic olefinic compounds having at least one double bond such as hydrides of aromatic ring part in vinylaromatic monomer such as hydrogenated styrene, etc., or these derivatives, are described in 0013 of the English specification, as filed; however, the cyclic olefin (A1) is not styrene itself which is an aromatic hydrocarbon having a conjugated bond. Therefore, the alicyclic olefinic resin (A) in the present invention does not include styrene butyl-acrylate as described in the office action, and styrene-acrylate copolymer, styrene-methacrylate copolymer, styrene-butadiene copolymer, styrene-isoprene copolymer, etc., as described in JP

10-073959. The aromatic rings in these compounds are not changed even by copolymerizing.

Thus, the toner of JP 10-073959 does not contain the alicyclic olefinic resin (A) of the present invention.

According to the present invention, various superior characteristics such as colorlessness and transparency, low-temperature fixity and high-speed fixity obtained by superior heat characteristics, sharp molecular weight distribution, superior grindability (high productivity and sharp particle size distribution), low hygroscopicity, being nonpolluting, etc., are obtained. Furthermore, the present invention has also the effect in that the toner particles are not melted and adhered to each other, even if wax is contained in the toner in a small amount (0.1 to 5 weight %). The melted toner is hardly adhered to charging members of a developing device, and, moreover, since in producing the toner, it is easy for a small amount of the wax to be uniformly and finely dispersed in the binding resin, melt contamination resistance is not deteriorated. Thus, the toner of the present invention has superior melt contamination resistance, in which the upper limit of the non-winding temperature range is 190°C or more, as described in the Examples, by containing alicyclic olefinic resin (A) copolymerizing cyclic olefin (A1) and acyclic unsaturated monomer (A2). Therefore, it is not necessary for the toner of the present invention to contain wax in a large amount of 7 to 20 weight % as in general conventional toners containing alicyclic olefinic resin. See, e.g., a comparison of the Examples of the present invention in Table 1 with Comparative Examples in Table 2 on page 29 of Applicant's specification.

Therefore, claims 3 to 6 and 8 to 12 are not disclosed by and would not have been obvious over JP 10-073959, which does not contain the alicyclic olefinic resin

(A) made by copolymerizing cyclic olefin (A1) and acyclic unsaturated monomer (A2), as presently claimed.

In view of the foregoing remarks, favorable reconsideration and allowance of all of the claims now in the application are requested.

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Respectfully submitted,

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